INFINITY Software v6.3.0

What's New

INFINITY Software v6.3.0 Release

This release introduces a number of enhancements to the INFINITY ANALYZE package.

Camera Device Drivers

- Adjusted INFINITY1-1C device driver to correct incompatibility occurring with some Windows 7 computers
- INFINITY2-3C camera device driver updated.

INFINITY CAPTURE & TWAIN interface

- Corrected issue where captured image color did not match the live preview
- Established persistence of window position in dual monitor configurations, to prevent the live preview from returning to the main monitor location

INFINITY ANALYZE

- Refer to the *INFINITY ANALYZE User's Manual* for Release 6.3.0, which has been updated with the changes to the user interface and inclusion of the new features and functions.
- Measurement on live preview is now available. Users can take measurements without the need to first capture an image. The live preview is temporarily frozen while measurement operations are underway, but the live updates resume when the measurement tool is closed. A calibration preset must be active for accurate measurement results at a given magnification.
- The ability to define an ROI in a live preview window or on a captured image is now provided. Frame rate increases are realized when using a cropped ROI invoked through the Adjust -> Crop menu option. The area outside the active ROI can be masked. A cropped selection from a captured image can be saved to provide an exactly dimensioned image extract to save to file, if desired.
- Dynamic bitmap overlay is now available as Project Tags, from the Annotate menu. Define both fixed and dynamic text or image overlay to be added automatically to captured or live preview images. Time / date or project IDs can now be easily added to any images.
- Micrometer placement options have been altered to minimize the chance of specifying an incorrectly labeled micrometer bar on an image. The length of the bar is determined by the numeric value entered for the label text. If desired, the automatic label can be omitted and a custom label can be added manually as an annotation.

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- Direct export of measurement records into a new Excel spreadsheet has been added to the Measure menu
- Measurement operations now include a temporary line from the current vertex to the start point for easier tracking
- Polyline measurements now support both vertex placement and freehand drawing interchangeably
- The ability to select and delete an individual measurement has been implemented
- All Annotation object text and graphic properties are controlled through a single dialog with multiple tabs.
- Annotation objects and Project Tags can be duplicated from a captured image onto the live preview
- Annotation objects overlaid on the live preview are preserved as annotation objects in the captured image, and can be manipulated after the capture.
- The Live Preview window can be made to remain visible when images are captured, by choosing an option on the Help -> Settings menu
- A new option allows for captured images to be acquired using a Snapshot mode that provides for a lower image noise in captured images, when specified
- The Measure Options dialog now provides for the selection of a comma (,) or a period (.) as the decimal indicator used for measurement reports in the annotations and in the measurement auxiliary window.
- The File -> Time Lapse Capture menu item has been removed. Time Lapse is now controlled only from the Camera controls pane
- Changes to the way annotation objects are managed meant that the Adjust -> Overlay [color / size] menu functions are now obsolete. Use the Annotate -> Properties to change annotation appearances.
- Convert into Bitmap has been removed from the Annotate menu since bitmap overlays can now be managed dynamically using the Project Tags tool.
- A green progress bar replaces the live preview window during image capture operations. This is of specific benefit when image averaging or pixel-shifting functions are enabled.
- Image acquisition parameters have been adjusted to correct color shift observed with some camera models, between the appearance of the live preview when compared to the colors captured in the still image.

INFINITY Software v6.2.0 Release

This release includes driver addition.

The following list summarizes the highlights for this 6.2.0 release:

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Camera Device Drivers

- Added support for the new INFINITY3-1UR camera.

INFINITY Software v6.1.0 Release

This release includes several device driver updates, as well as improvements to performance and some bug fixes for INFINITY ANALYZE.

The following list summarizes the highlights for this 6.1.0 release:

Camera Device Drivers

- Device driver files for the INFINITY*2-3*C camera have been updated to correct a problem with captured images that were all black in INFINITY CAPTURE. This timing problem was only evident on some computers.
- An update to the INFINITY*2-1* device driver fixes an issue present on some Windows 7 computers.
- Improved frame rate range adjustments included in the device drivers for the INFINITY*2-1*R and INFINITY*2-5* camera models.
- An improvement to the INFINITY*2-5* drivers to better manage transitions between clocks.

INFINITY CAPTURE & TWAIN interface

- No changes.

INFINITY ANALYZE

- The area WB (white balance) function has been revised since release 6.0.0 where performance was compromised on several camera models.
- Camera frame rates have been configured to operate at their fastest speeds.
- Closing the histogram window removes additional processing that was impacting the frame rate performance for the INFINITY*1-5* and INFINITY*2-5* models on some computers.
- Certain computers experienced lock-up with ANALYZE when capturing images from the INFINITY*1-3*C camera model. The application has been altered to correct this issue.

INFINITY Software v6.0.0 Release

This release incorporates improvements to the installation package, device driver updates, and some nice additions to the INFINITY ANALYZE package. The locations of some

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application-related files have been altered to better accommodate Windows 7 and VISTA permissions.

The following list summarizes the highlights for this 6.0.0 release:

Camera Device Drivers

- Improvements to the INFINITY*1-2*CB exposure controls allow this frame rate-centric camera to respond more like an exposure-centric camera.

INFINITY CAPTURE & TWAIN interface

- Changed location of Last Settings file to overcome write protection issues as follows:
  On VISTA & Windows 7 – C:\Program Data\Twain_32\INFINITY
  On Windows XP – C:\ \Documents and Settings\All Users\Application Data\TWAIN_32\INFINITY\

INFINITY ANALYZE

- Now includes dynamic window zoom for both live preview and captured images.
- New Cell Counting menu item available on the Measure menu allows for interactive thresholding and quantitative results based on pixel intensities.
- The image title bar is updated with the image file name as soon as it has been saved.
- Micrometer bar text and length are now associated to the active calibration.
- User Manual has been fully updated to reflect all menus and dialogs.
- User interface is now available in 7 different languages.
- Help menu provides direct access to video tutorials available on the Lumenera website.
- New Annotation menu item creates a bitmap overlay image from displayed graphics.
- All auxiliary windows and toolbars can be interactively enabled / disabled from the Help -> Settings dialog, on a new tab.
- Photometry auxiliary window displays pixel intensity distribution for measured areas.
- The camera presets file (containing calibrations) is now located in this folder location:
  On VISTA & Windows 7 – C:\users\[*User Name*]\AppData\Roaming\INFINITY ANALYZE\
  On Windows XP – C:\Documents and Settings\ [*User Name*]\Application Data\INFINITY ANALYZE\

KNOWN ISSUES

- Frame rate of the INFINITY*1-2*CB is limited to 10 fps, but can be extended to 15 fps in INFINITY CAPTURE. Note that vertical bands may be visible, impacting image quality.
- Frame rate of the INFINITY*1-2*CB is limited to 5 fps in INFINITY ANALYZE, but will be increased in a subsequent release.

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- INFINITY ANALYZE does not currently take advantage of the modified 'exposure-centric' behavior that has been implemented for the INFINITY*1-2*CB camera, and included with INFINITY CAPTURE. This will be addressed in a subsequent release.

INFINITY Software v5.0.6 Release

The following list summarizes the highlights for this 5.0.6 release:

INFINITY ANALYZE

- Added the default previewing video mode for the INFINITY*2-5* camera.

Camera Drivers

- Improvement of the exposure and gain properties control.

INFINITY Software v5.0.5 Release

The following list summarizes the highlights for this 5.0.5 release:

Camera Drivers

- Added support for the new INFINITY*Lite*B cameras.
- Improved support for the new INFINITY*1-2*B cameras.

INFINITY Software v5.0.4 Release

The following list summarizes the highlights for this 5.0.4 release:

Camera Drivers

- Added support for the new INFINITY*4-11* cameras.
- Added support for the new INFINITY*2-5* cameras.
- Added support for the new INFINITY*1-2*B cameras using the SOI image sensor.

Upgrade to new API version 2.1.0.241

- Improve Windows 7 support.

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INFINITY Software v5.0.3 Release

This section describes all the additions and updates we have made to the latest release of the software:

Camera Drivers

- Added CIM3 support for INFINITY*2-1* and INFINITY*2-2* cameras.

INFINITY Software v5.0.2 Release

The following list summarizes the highlights for this 5.0.2 release:

Installation and Camera Drivers

- The installation process has been revised to include a screen prompting for the INFINITY camera to be disconnected from the PC prior to continuing.
- New driver file updates are included to correct an issue with the INFINITY*4-11* and Lw11057-SCI models that could result in corruption of the live video preview. Currently does not support external signaling of start of frame in Video mode (GPO4: Video SoF).
- Corrected an issue where pixels would not fully saturate at default gain for the INFINITY*1-5* model. In addition, the following Still Mode properties have been enabled:
  - STILL_EXPOSURE
  - STILL_GAIN
  - STILL_GAIN_RED
  - STILL_GAIN_GREEN1
  - STILL_GAIN_GREEN2
  - STILL_GAIN_BLUE
  - STILL_STROBE_DURATION
- Corrected issue for the INFINITY*4* and Lu330 camera models with driver signing for Windows Vista. Also improved quality of Brightness, Contrast and Gamma in 16-bit mode.

INFINITY ANALYZE

- ANALYZE Settings files have been relocated to the standard Windows folder location for Application Data, providing better compatibility with future releases of the O/S. This new location will be different on XP and VISTA platforms:

  For XP:

  [Drive:]\Documents and Settings\All Users\Application Data\INFINITY ANALYZE\

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For VISTA:
[Drive:]\ProgramData\INFINITY ANALYZE\Settings

- A problem has been rectified with saving new camera Presets. The original release of INFINITY 5.0 introduced a problem resulting in ANALYZE failing to store the camera white balance settings. When a Preset was restored, the appropriate color gains were not being set on the camera.
- An incorrectly imposed restriction on number of decimal places allowed in the Measure Options dialog has been removed. Entry of any value less than 2 was not permitted in the first releases of the 5.0 version.
- An enhancement has been added to the micrometer bar placement allowing the previously selected location to be used again in the current image. The option is presented in the pop-up dialog after using the mouse to select a location in the image. This allows for the micrometer bar to be easily placed in a consistent location on all images, if desired.
- Italian language files have been added to the installation, and the additional entry may now be selected from the View -> Language menu option.
- The ANALYZE Advanced Features USB-Key is now being distributed as a driver-less device, making for a simpler installation supported across more O/S platforms. The Release 5.0.2 of INFINITY ANALYZE is required to take advantage of this new style of USB key.

INFINITY Software v5.0.1 Release

Includes a correction to the driver for the INFINITY*1-3* model. This patch release is identical to the 5.0.0 release in all respects for INFINITY CAPTURE and ANALYZE applications.

INFINITY Software v5.0.0 Release

Release Highlights

The following list summarizes the highlights for this 5.0.0 release. Details can be found below, with even more information available in the Release Notes and product documentation.

- 64-bit drivers are now available for all INFINITY cameras on Windows platforms
- ANALYZE now includes a FULL SCREEN mode
- Preview grid pattern artefacts have been eliminated from ANALYZE
- Bitmap Overlay added to Live Preview and Captured images in ANALYZE
- CAPTURE can now export camera settings to a named ANALYZE preset
- ANALYZE now offers a Simple layout for demos and first time operators

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Camera Drivers

- Added support for 64-bit Windows XP and Windows Vista operating systems.
- All drivers are digitally signed for Windows Vista operating systems.
- Added support for new revision of INFINITY*2-2* cameras.

INFINITY CAPTURE

- New function to export current camera settings into an INFINITY ANALYZE preset.
- Added additional 75% zoom mode to preview zoom control.
- Improved AVI filenames when converting a RAW AVI file to a standard AVI file.

INFINITY ANALYZE

Changes to the Layout:

- On initial start-up of the software, the first-time user will be presented with ANALYZE shown in a simple configuration.
- New options to quickly modify the application layout are provided as **Simple Mode** and **Enable All**, available from the **View Menu**.
- A new **Full Screen** display function has been added. This feature allocates the maximum amount of the display for either the live preview or for captured images. The application can switch in and out of Full Screen mode by using the **View menu**, or with a simple press on the **<Esc>** key.
- The contrast of the status bar has been improved by making the background color black.
- Some toolbar icons used for image positioning have been removed to reduce clutter. These seldom used navigation functions are now accessible only from the **View menu**, as items labelled as **Center** and **Corner**.
- The **Field Menu** entry formerly labelled as **Vector Arithmetic** has been changed to **Math.**
- The buttons labelled **Video On/Off** have been removed from the CAPTURE Control panel, providing more space.
- The sequence of Control panels (from top to bottom) has been rearranged for greater ease of use.
- The **Measure Menu** has undergone a transformation to make the most commonly used options readily accessible and to improve the ease of use for common measurement tasks. The **Calibration** and **Micrometer** functions have been moved onto this menu.
- Revisions to the **Micrometer** function allow the bar and the text to be re-positioned anywhere on the image by placing them in the annotation layer.

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- The distance or length measurements tool formerly labelled as **Caliper**, has been changed to **Point to Point.**
- A new option has been added to the **File menu** called **Close All Images**. This feature pops-up a single confirmation dialog prior to closing down all displayed images in the working area.
- Warnings and information messages now alert the operator when the **Field Group** memory is consumed, or if the number of fields has been used.

Camera performance and controls:

- The **Camera Control** panel now includes a new option to provide a **Continuous Auto Exposure** function.
- In previous revisions of the ANALYZE package the live preview from certain high resolution camera models (notably the INFINITY*2-3*, INFINITY*1-5*, and INFINITY*4-11*) would often produce a grid pattern appearance that varied based on the display window dimensions. While this artefact was observed only in the live preview and not on captured images, it was an undesirable characteristic. Modifications have been made to the display capabilities to help eliminate or minimize this problem.

Other functional changes

- A **Bitmap Overlay** function has been added to both the Live Preview display and to Captured images. This function is accessed using the **File Menu → Bitmap Overlay…**
- The newly designed **Grid Options** function allows for the origin and size of the grid spacing to be easily defined. A new tool allows for the operator to specify the grid parameters using the cursor position on the captured image.
- It is now possible to change the units of measurement without re-calibrating.
- A new auxiliary window called **Photometry** has been added to ANALYZE. It reports pixel intensity values for any defined measurement areas.

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